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#19
3/11/03
T.M.L

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:	)	
	)	Before the Examiner
Patrick Egan	)	
	)	Nguyen, Chi Q.
Serial No.: 09/633,937	)	
	)	Group Art Unit 3637
Filed: August 8, 2000	)	
	)	Our Ref.: 20181-2
PRE-FABRICATED WALL PANELING	)	

DECLARATION OF PATRICK EGAN

I, Patrick Egan, hereby swear and affirm as follows:

1. I am the inventor of the above application. I am also the President and owner of Thermocore Panel Systems ("Thermocore"), the seller of the invention covered by the claims in the present application. Our web site is < >.

COMMERCIAL SUCCESS

2. The invention has been very commercially successful. Set forth below is a photograph of merely one example of a custom home built with the present invention:

A

The commercial success of the invention has been caused by the combination of features claimed as the invention. In particular, Thermocore sells a prefabricated wall panel covered by the claims of the present invention having an overall panel thickness of four inches (hereafter the "Four Inch Panel"). Thermocore also sells an otherwise identical product that is not covered by the claims which has an overall panel thickness of 4 ½ inches ("the 4 ½ inch panel"). As explained further below, the Four Inch Panel invention has been overtaking the 4 ½ inch panel in terms of commercial sales. Specifically, overall sales for Thermocore have increased approximately 26 percent in 2001 and thereafter increased again approximately 29 percent in 2002. Nearly all of that growth has been from increasing sales of the Four-Inch Panel invention. Conversely, the sales volume of the 4 ½ inch panel, not covered by the patent claims, has been generally stagnant or on the decline since the introduction of the invention.

3. Thermocore's business is generally divided into two divisions, our "Structural" products and our "Timber Frame" products. The claimed invention (the Four Inch Panel) as well as the 4

that the present invention can achieve, notwithstanding the non-conventional reduction in thickness, makes the inventive Four Inch Panel an appealing product.

6. Customers now call Thermocore to get the Four Inch Panel which has allowed us to sell in markets that we could not compete prior to the launch of the inventive Four Inch Panel. Moreover, presently we are backlogged with orders for the invention since the commercial demand exceeds our present ability to meet that demand.

7. Ordinary building with panels will cost a little more than if one were to stick build the exterior walls and roof and house. However, when you convert the cost difference on a typical 2,200 sq./ft. house the difference in cost may add $10.00 to your monthly mortgage payment. But when you look at how the panels will impact your monthly utility bills, we have found that a home of this size will see a reduction of approximately $80-120 per month in their energy costs.

INDUSTRY RECOGNITION

8. The present invention has received industry recognition, being featured in several trade publications, namely:

- Building Systems Magazine, October 1999 (Exhibit A);
- Building Components, November 1999 (Exhibit B);
- Building Demensions, November 1999 (Exhibit C); and,
- Professional Builder, January 2000 (Exhibit D).

THE PORTER PANELS

9. I have reviewed the two U.S. patents to William H. Porter (Patent No. 5,771,645 and Patent No. 5,497,589). Mr. Porter's company, W. H. Porter, Inc., sells his product commercially as "Porter Structural Insulated Panels" as illustrated on that company's web site < >. Portions of that web site are attached as Exhibit E of this

Declaration. Notably, as set forth, the panel thickness are conventional thickness of "4 ½ inch" and "6 ½ inch" and greater. Specifically, this overall panel thickness is dictated by the conventional use of a conventional "2 x 4" having actual dimensions of approximately 1.5" by 3.5". When this conventional 2 x 4 is used in connection with 7/16 inch oriented strand board, set forth in the Porter web page, the resulting panel thickness is the conventional 4 ½ inch. Moreover, the Porter panels utilize expanded polystyrene (EPS), indicated on the web site as only having an R value of 3.85 per inch thickness at 75 degrees Fahrenheit. As such, as set forth in the second page of Exhibit E, even the thicker 4 ½ inch Porter panel only has an R value of 15.8. Porter's conventional thinking, as opposed to the present invention, does not utilize the overall panel thickness of the present invention which allows the convenience of cost savings of avoiding furring of window and door jams. Moreover, the R-value of the Porter product is less than the preferred insulation of the present invention, even though the Porter product is actually thicker. Thus, the Porter product does not enjoy the advantages of the Thermocore panel in reducing the cost of furring window and door jams, reducing bulk for shipment and storage (by virtue of being a thinner panel), while having improved insulation characteristics.

10. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

2/11/03
Date

Patrick Egan

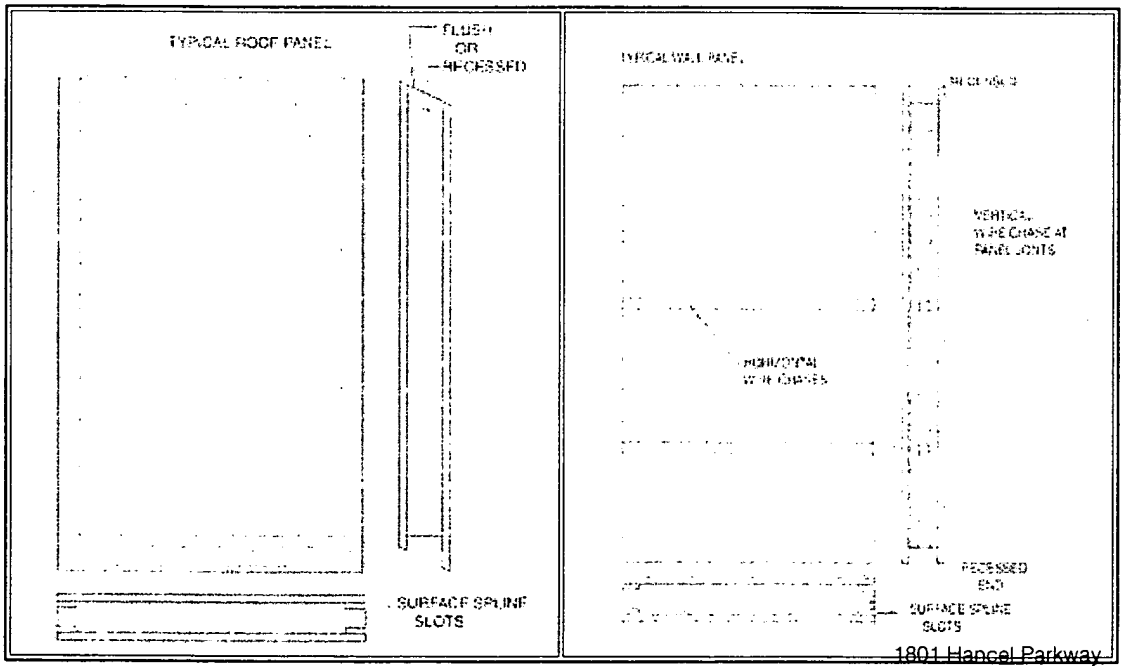
PORTER STRUCTURAL INSULATED PANELS

Thermocore
Structural Insulated Panel Systems

For more information about ordering or specifying Porter SIP's:	
By Phone:	(800) 354-7721 East or (360) 704-3359 - West
By Fax:	(616) 399-9123 East or (360) 704-3362 - West
Mail: Eastern U.S. & International	Email to: sales@portersips.com 4240 N. 136th Ave. Holland MI 49424 U.S.A. (616) 399-1963
Mail: Western U.S.	Email to:porterpanl@aol.com 711 Airdustrial Way Tumwater, WA 98502 U.S.A. (360) 704-3359

RETURN TO THE W.H. PORTER MAIN SELECTION PAGE

BASIC SIP SPECIFICATIONS



PANEL THICKNESSES:

Standard thicknesses for the EPS foam core of PORTER SIP's are 3 5/8",

1801 Hancel Parkway
Mooresville, Indiana 46158
Phone: (317) 831-8888
Fax: (317) 831-8887
Toll Free: (877) 550-8973
www.thermocore.com
salesinfo@thermocore.com

5 5/8". 7 3/8", 9 3/8" and 11 3/8" These sizes allow for the use of standard dimensional lumber wherever required in the plans.

PANEL DIMENSIONS:
Panel lengths of 8', 9', 10', 12' and 16' are common, however panels are available up to 8' X 24' or any size that can be cut from 8' X 24' or 4' X 24' sheet of Oriented Strand Board. Panels with custom angles and/or cut-outs are also available.

FACTORY PRE-CUT PANEL OPTIONS:
One important decision to be made is whether to have panels pre-cut at the factory or cut at the site. This decision depends upon the individual job, the panel shape and other factors. The best solution is often a combination of factory AND site cut panels. Typically, site-made cuts might be made at the last panel in a section of wall where the foundation dimensions and the dimensional tolerance in the panels' width may vary. Onsite-cutting the last panel in a sequence allows for an exact fit. When large window openings and notches may affect the strength of a panel, it is often better to cut them on the site after they're erected.

Pre-cut panels can be provided with a numbering system that relates to the position of the panels on the plan. In such a case the structure can be assembled like a pre-numbered jigsaw puzzle with the answers and instructions already provided.

PANEL TYPES

There are threee basic panel types of PORTER SIP's, Type A. B. & C...

TYPE "A" PANELS
Type 'A" panels are basic structural panels having a 7/16" thick Oriented Strand Board (OSB) skin on both faces of the panel. Type '"A" panel sizes range from 4' X 8' to 8" X 24'. Overall thicknesses can be 4 1/2", 6 1/2", 8 1/4", 10 1/4" and 12 1/4"

Type "A" panels can carry loads in many directions when properly installed. They can withstand transverse, axial, racking, and combination loads within the load limits defined in the tables of NER 467.Type "A" panels require covering on both interior and exterior surfaces after installation as follows:.

INTERIOR SURFACE:All major building codes require that the interior surface must be covered with 1/2" regular wallboard to act as a thermal barrier.

EXTERIOR SURFACE:The exterior surface must be covered with a weather resistant siding or roofing. The covering may include a layer of felt roofing or eqivalent betwen the covering and the panel skin. See siding or roofing manufacturer's recommendation.

Type "A" panels combine structure and insulation economy and versatility.

TYPE "B" PANELS
Type "B" panels are structural panels with 7/16" or greater rated structural sheathing on the exterior surface and 1/2" or thicker regular gypsum wallboard on the interior surface.

5 5/8". 7 3/8", 9 3/8" and 11 3/8" These sizes allow for the use of standard dimensional lumber wherever required in the plans.

PANEL DIMENSIONS:
Panel lengths of 8', 9', 10', 12' and 16' are common, however panels are available up to 8' X 24' or any size that can be cut from 8' X 24' or 4' X 24' sheet of Oriented Strand Board. Panels with custom angles and/or cut-outs are also available.

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PORTER
STRUCTURAL INSULATED PANELS

Frequently asked questions about building with Structural Insulated Panels

This page is brand new. We've posted a few of the most commonly-asked questions about building with SIP's. In the meantime, send us YOUR questions to be included on this page, We'll post all questions of general interest here. Send to:

Gary DeLong [redacted]

Q: What are structural insulated panels?

A: Structural Insulated Panels (Sip's) Consist of a foam core of rigid insulation laminated between two sheets of 7/16" Oriented Strand Board (OSB) with an industrial adhesive to form one solid structural member. Other lamination faces are available, both structural and non structural. These components composing the SIP panel, serve as your exterior wall roof and/or floor systems to give you loading and spanning capabilities not found in ordinary construction. We can custom cut each panel to your desired house plan to insure quality and speed of construction as well as an energy efficient home that cannot be matched by fiberglass batt insulation/stick framing..

Q: How do I run electrical in an enclosed panel?

A: We supply, upon your request and discretion, horizontal wire chases located through the core of your panel at standard outlet and switch heights. Wire channels are also located on the vertical panel edges and/or the top and bottom as well. This will allow your electrician to snake wires through these channels and loop from under the floor or in your roof trusses. Our installation manual has more information and helpful tips on electrical.

Q: Will using SIP panels limit my home design?

A: Not at all! We manufacture Porter panels to your specifications and your home design. Panels work in conjunction with roof trusses, floor systems and any other building products it takes to build your home. One thing to keep in mind: when ordering your windows and doors (exterior), you will require a finished window jamb of 5-1/16" after drywall is installed. Please check with your preferred window/door supplier to see if there is any additional cost.

Q: What is the R-Value of Porter Panels?

A: A lamination of OSB/EPS/OSB: 4.5" Panels have a value of 16, 6.5" panels 24, and 8.25" panels have an R-30. Just keep in mind as important R -Value is to the home owner and builder, its the thermal efficiency of SIPs that bring them even further above standards construction. Thermal efficiency is also improved by the lack of moisture penetration and air leakage through the panel that really mean the most to you in significant energy savings.

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